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(54) **Method for discriminating types of nucleic acid bases.**

(57) This invention provides a method for discriminating four kinds of nucleic acid bases of DNA at high speed by utilizing chromophores intrinsic to DNA. The method comprises the steps of adding the sample to a polar glassy solvent; reducing a temperature the glassy solution; adding a (n, π^*) quencher as a fluorescence intensifying reagent to the solution; irradiating an excitation light of UV laser beams thereto; measuring lifetimes of fluorescence from the sample; and discriminating the nucleic acid bases of DNA.

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Application Number
EP 92 31 0007

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.5)
D,Y	GUÉRON, M. ET AL. 'in: Basic Principles in Nucleic Acid Chemistry, vol 1, "Excited States of Nucleic Acids," pages 311-398' 1974, ACADEMIC PRESS, NEW YORK * page 322 - page 328 *	1-5	C12Q1/68 G01N33/58
D,Y	WO-A-89 03432 (UNITED STATES DEPARTMENT OF ENERGY) * page 8, line 5 - line 12 *	1-5	
A	CHEMICAL PHYSICAL LETTS., vol.174, no.6, 23 November 1990, AMSTERDAM, NL pages 553 - 557 SHERA, E. ET AL 'detection of single fluorescent molecules' * the whole document *	1,5	
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The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 26 January 1995	Examiner Osborne, H
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons A : member of the same patent family, corresponding document</p>			

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P, A	CHEMICAL ABSTRACTS, vol. 115, no. 23, 9 December 1991, Columbus, Ohio, US; abstract no. 248890, SOPER, S. ET AL 'Rapid sequencing of DNA based on single molecule detection' page 173 ;column LEFT ; * abstract * & PROC. SPIE-INT. SOC. OPT ENG., vol. 1435, 1991 pages 168 - 178 -----	1-5	
			TECHNICAL FIELDS SEARCHED (Int. CL.5)
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CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- A : member of the same patent family, corresponding document	
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